

I AMENDED CLAIMS

1. A method of storing solar energy, said method comprising the steps of:

producing by photosynthesis an amount of biomass capable of forming charcoal;

converting said amount of biomass into charcoal;

retrievably bunkering a first portion of said charcoal for an extended period of time and thereby reducing the CO₂ emission into an atmosphere and a concomitant greenhouse effect by an amount similar to that generated by combustion of either said first portion of said charcoal or the corresponding amount of said biomass; and

converting of a remaining portion of said charcoal into energy or an energy source with concomitant release into the air of a corresponding amount of CO₂;

whereby in said step of converting of said remaining portion of said charcoal into energy or an energy source said remaining portion of said charcoal is limited to an amount which, as a result of such conversion, generates an amount of CO₂ compatible with the respectively desirable atmospheric CO₂ level.

2. The method as claimed in claim 1, wherein said remaining portion of said charcoal is converted by chemical reaction to produce hydrogen as an energy source.

5. The method as claimed in claim 1, wherein said step of retrievably bunkering

said first portion of said charcoal for the extended period of time further comprises storing said first portion of said charcoal in at least one subterranean cavity.

6. The method as claimed in claim 5, wherein said step of retrievably bunkering said first portion of said charcoal for the extended period of time in at least one subterranean cavity further comprises selecting said subterranean cavity from a coal mine, an ore mine or a salt mine.

B² 7. The method as claimed in claim 1, wherein said step of retrievably bunkering said first portion of said charcoal for the extended period of time, further comprises storing said first portion of said charcoal in an above-ground bunker facility.

B³ 8. The method as claimed in claim 5, wherein said step of retrievably bunkering said first portion of said charcoal for said extended period of time consists of storing said first portion of said charcoal under an inert gas condition.

9. The method as claimed in claim 8, wherein in said step of retrievably bunkering of said first portion of said charcoal said inert gas is in the form of gaseous CO₂.

10. The method as claimed in claim 13, further including a step of storing said remaining portion of said charcoal under an inert gas condition prior to converting said remaining portion of said charcoal into energy or an energy source.

11. The method as claimed in claim 10, wherein in said step of storing said remaining portion of said charcoal under the inert gas condition said inert gas is in the form of gaseous CO₂.

12. The method of claim 13, wherein is said step of retrievably bunkering, said first portion of said charcoal is retrievably bunkered for at least 20 years.

13. A method of storing solar energy, said method comprising the steps of:

- producing by photo syntheses an amount of biomass capable of forming charcoal;
- converting said amount of biomass into charcoal;
- retrievably bunkering a first portion of said charcoal for an extended period of time and thereby reducing the CO₂ emission into an atmosphere and a concomitant greenhouse effect by an amount similar to that generated by combustion of either said first portion of said charcoal or the corresponding amount of said biomass; and

converting of a remaining portion of said charcoal into a synthesis gas for

new
not further industrial use;

whereby in said step of converting of said remaining portion of said charcoal

said remaining portion of said charcoal is limited to an amount which as a result of such

new
matter conversion generates an amount of CO₂ compatible with the respectively desirable atmospheric CO₂ level.

B3 14. A method of storing solar energy, said method comprising the steps of:

producing by photo syntheses an amount of biomass capable of forming charcoal;

converting said amount of biomass into charcoal;

retrievably bunkering a first portion of said charcoal for an extended period of time in at least one subterraneous cavity, so as to reduce the CO₂ emission into an atmosphere and a concomitant greenhouse effect by an amount similar to that generated by combustion of either said first portion of said charcoal or the corresponding amount of said biomass; and

converting of a remaining portion of said charcoal into energy or an energy source with concomitant release into the air of a corresponding amount of CO₂;

whereby in said step of converting of said remaining portion of said charcoal into energy or an energy source said remaining portion of said charcoal is limited to an amount which, as a result of such conversion, generates an amount of CO₂ compatible with the respectively desirable atmospheric CO₂ level.

15. The method as claimed in claim 14, wherein said remaining portion of said charcoal is converted by chemical reaction to produce hydrogen as an energy source.

63 16. The method as claimed in claim 14, wherein said step of retrievably bunkering said first portion of said charcoal for the extended period of time in at least one subterranean cavity further comprises selecting said subterranean cavity from a coal mine, an ore mine or a salt mine.

17. The method as claimed in claim 14, wherein in said step of retrievably bunkering said first portion of said charcoal for the extended period of time, said first portion of said charcoal is retrievably bunkered under an inert gas condition.

18. The method as claimed in claim 17, wherein in said step of retrievably bunkering said first portion of said charcoal said inert gas is in the form of gaseous CO₂.

19. The method as claimed in claim 14, further comprising a step of storing said remaining portion of said charcoal under an inert gas condition prior to converting said remaining portion of said charcoal into energy or energy source.

20. The method as claimed in claim 19, wherein in said step of storing said remaining portion of said charcoal under the inert gas condition said inert gas is in the form of gaseous CO₂.

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21. The method of claim 14, wherein in said step of retrievably bunkering said first portion of said charcoal is retrievably bunkered for at least 20 years.

22. A method of storing solar energy, said method comprising the steps of:

- producing by photo syntheses an amount of biomass capable of forming charcoal;
- converting said amount of biomass into charcoal;
- retrievably bunkering a first portion of said charcoal for an extended period of time in an above-ground bunker facility and thereby reducing the CO₂ emission into an atmosphere and a concomitant greenhouse effect by an amount similar to that generated by combustion of either said first portion of said charcoal or the corresponding amount of

said biomass; and

converting of a remaining portion of said charcoal into energy or an energy source with concomitant release into the air of a corresponding amount of CO₂;

whereby in said step of converting of said remaining portion of said charcoal into energy or an energy source said remaining portion of said charcoal is limited to an amount which as a result of such conversion generates an amount of CO₂ compatible with the respectively desirable atmospheric CO₂ level.

63 23. The method as claimed in claim 22, wherein said remaining portion of said charcoal is converted by chemical reaction to produce hydrogen as an energy source.

24. The method as claimed in claim 22, wherein said step of retrievably bunkering said first portion of said charcoal for said extended period of time consists of retrievably bunkering said first portion of said charcoal under an inert gas condition.

25. The method as claimed in claim 24, wherein in said step of retrievably bunkering of said first portion of said charcoal said inert gas is in the form of gaseous CO₂.

26. The method as claimed in claim 22, including the step of storing said remaining portion of said charcoal under an inert gas condition prior to converting said remaining portion of said charcoal into energy or an energy source.

63 27. The method as claimed in claim 26, wherein in said step of storing said remaining portion of said charcoal under the inert gas condition said inert gas is in the form of gaseous CO₂.

28. The method of claim 22, wherein is said step of storing, said first portion of said charcoal is stored for at least 20 years.

II Arguments and Remarks

The undersigned wishes to thank Examiner Cephia D. Toomer for the courtesy extended to him during the personal interview on November 21, 2002.

With respect to the informalities of the Specification mentioned by the Examiner in paragraph 2 of the Action, the abbreviations noted at page 3 have the following conventional meaning: